REMARKS

Applicants has carefully reviewed and considered the Examiner's Action mailed March 24, 2005. Reconsideration is respectfully requested in view of the comments set forth below.

The specification is amended to overcome the informalities set forth in Paragraph 3 of the Action, as discussed below. Claims 1-2 and 14-15 are canceled and claims 3-4, 8-9, 13, 16-17, 21-22, 24, 26-28, 30-31, and 35-38 are amended by this Amendment. Accordingly, claims 3-13 and 16-38 are pending in the present application.

In response to the informalities noted in 3a.-b. of the Action, the indicated paragraphs have been revised so that the paragraphs are divided into several short sentences for better clarity. Figure 6(b) of the drawings has been replaced with a revised sheet showing the terms "meaning!=person" to resolve the informality noted in 3 c. of the Action.

3 d. in the Action objected to page 13, lines 13-30 because the specification did not describe the "{}" shown in Figure 4. By the foregoing amendments to the specification, the "{}" indicate that the feature value corresponding to the feature name is variable. That is, meaning = {meaning}, as shown in Figure 4, indicates that the feature value corresponding to the feature name "meaning" is a variable "meaning". The feature value corresponding to the feature name (meaning) entered in the left side member is a variable bearing the name entered inside the "{}". Accordingly, if the right side members corresponding to two or more feature names include "{}" with identical variables entered within the respective "{}",it means that the two or more feature names share a common feature value. In the example presented in Figure 4, a restriction that the feature value

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Amendments to the Drawings:

Figure 6(b) is corrected to show the term "meaning!=person", as required.

Figure 21 is revised to show reference characters "21-1" to "21-5".

Replacement Pages:

Page 4/35 illustrating Figures 5 and 6; and

Page 13/35 illustrating Figures 20 and 21.

corresponding to the feature name meaning is imposed with regard to the elements "NP" and "VP" in the pattern. The paragraph spanning pages 13 and 14 has been amended to describe the meaning of the "{}".

Reference numbers "node 21-1", "node 21-1" and others in the last paragraph on page 27 of the specification were not shown in Figure 21 or 22 of the drawings. By the attached Replacement Sheet, Figure 21 is revised to show reference characters "21-1" to "21-5", thus obviating this objection (3e.).

The fourth paragraph on page 41 and Figure 33 were objected to because "applicant fails to clearly define 'the central element' and how the features in 'the central element' are exactly copied in the example (no any feature shows in the central element, except symbol *)." (3 f. of Action) While the parenthetical phrase is not fully understood by Applicants, the central element (shown by *) is a pattern component holding central element information. In the example presented in Figure 33, the feature name of "2:VP" and the corresponding feature value (feature restriction) "num=sg" are copied as the feature name and the feature value of S (i.e., the parent node) of the left side member. As an example, "2:NP" is not a central element and thus, its feature name and feature value are not copied as the feature name and the feature value for S. The paragraph spanning lines 15-27 on page 41 has been revised in accordance with the above description.

In addition to the above changes to the specification, Applicants have revised paragraphs to improve the reading of the English translation of an Japanese language document. In view of the above, it is believed that the informalities noted in the Action have been overcome and that the objection to the disclosure should be withdrawn.

Claims 4-10, 13, 17-23, 26-27, 30-31 and 35-39 were rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, claims 4 and 17 are rejected to because of the format of the dependent claim. Claims 4 and 17 are amended to recite "further comprising" in the second clause as suggested by the Examiner.

Claim 7 recites:

> wherein the pattern evaluation means pass over the applicable natural language patterns with the priority relatively lower than the a normal priority when plural natural language patterns with the same pattern name and the same pattern application condition and with different information on priority exist.

Contrary to the Action's interpretation of this claim, claim 7 covers a natural language processing apparatus where the pattern evaluation means pass over the applicable natural language patterns with the priority relatively lower than a normal priority.

With respect to claims 8-9 and 13, the Action details three areas: a., b., and c. Claim 8 covers a device having tree structure evaluation means for evaluating the priority between plural tree structures according to evaluation and allotment means that are capable of evaluating each tree structure. The evaluation and allotment method is explained from the third paragraph on page 26 through the second paragraph on page 28 of the originally-filed specification. The paragraph spanning pages 26 and 27 is revised to describe the term "sectional tree". The term "sectional tree" is referred to as a "child-node" in the specification. Thus, claim 8-9 and 13 are described in the originally-filed specification so that one of ordinary skill in the art would have understood the claimed subject matter.

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Claims 27 and 31 are rejected to because the Action believes that the recitation of a "central element information prescribing central pattern element in a feature restriction or a feature propagation on the left and/or the right side" is not clearly defined in the claim and the specification. Claims 27 and 31 have been amended to clearly define the invention and page 41 of the specification has been revised in accordance with the description above concerning "the central element" feature.

Claims 30 and 35-38 have been amended to delete the objected to adverb "smoothly". In addition, claims 35 and 37 have been revised so that the processing order is clear: 1. read out the feature restriction information of a natural language pattern; 2. convert the feature restriction information; and 3.store converted data into the pattern dictionary.

In view of amendments to the claims and the explanation above, it is believed that claims 4-10, 13, 17-23, 26-27, 30-31 and 35-39 are fully definite under 35 U.S.C. §112, second paragraph. Withdrawal of this rejection is respectfully requested.

Claims 1-2, 14-15, 27-28 and 31-32 were rejected under 35 U.S.C. §103 (b) as being unpatentable over U.S. Patent No. 6,778,949 to Duan et al. (hereinafter referred to as "Duan") as explained in paragraph 6 spanning pages 6-9 of the Action. In view of the cancellation of claims 1-2 and 14-15 and the amendments to claims 27 and 31, it is believed that this rejection has been rendered moot. However, to the extent the rejection applies to the amended claims, this rejection is respectfully traversed.

Duan is directed to a method and system to analyze, transfer and generate language expressions using compiled instructions to manipulate linguistic structures. As Figure 2a of Duan illustrates, the grammar of Duan is divided into parsing grammar,

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transfer grammar, and generation grammar. The Action recognizes that Duan does not disclose the recited pattern dictionary, but baldly concludes that the example database of Duan indicates that such a **dictionary** is well known in the art. According to Duan's disclosure, only the transfer grammar, which is input to a transfer module 222, would be used with the example database 220. Duan does not discuss the use of an example database in any of the other grammar sections. In particular, Duan discloses a source language dictionary 204 to decompose the words into morphemes. The morphological analysis module then builds a "feature structure" for each word. (See columns 5 and 6 of Duan). That is, as described in column 7, Duan discloses a transfer module that is used to match an input substructure or slot with a source language substructure or slot in the example database based on GPL rules conforming to transfer grammar. Nowhere does Duan disclose, let alone teach or suggest, the use of an example database with any of the other grammar sections, which include syntax analysis and syntax generation processing as required by the claimed invention. In addition, the transfer processing cannot be executed by using the database alone and consequently, the recited pattern dictionary is greatly different than the disclosed example database. Accordingly, it is believed that independent claims 27 and 31 (and their depending claims) are not rendered obvious by Duan.

In addition, claim 27 has been amended to distinguish "syntax analysis" from "syntax generation" processing. As a result, the recited processing executed by the pattern application means during syntax analysis and the processing executed by the pattern application means during syntax generation are achieved in two different manners. The syntax analysis, transfer and syntax generation executed according to Duan

are all feature structure based. Generally speaking, feature structure-based analysis

processing is achieved through "singularization", which means that all the feature

information is singularized to achieve a common set of feature information. That is, the

analysis, transfer and generation language structures and the attendant information of

Duan are all expressed and processed within a single frame (i.e., the feature structure).

Thus, Duan is not directed to a concept where information related to the central element

can be propagated during syntax analysis processing as claimed by Applicants. The Duan

specification does not include any description that is relevant to propagation. While Duan

may disclose terms equivalent to the recited left side member and right side member,

Duan is directed to a feature structure based analysis , transfer and generation.

Consequently, Duan does not disclose the recited pattern dictionary, dictionary reference

part that extracts at least one source and target language pattern from the pattern

dictionary, pattern inspection means for inspecting the extracted language and pattern

application means. Accordingly, withdrawal of the Duan rejection is respectfully

submitted.

With respect to claim 28, column 7, line 38 to column 8, line 25 of Duan relates to

feature structures input at the transfer module and details of the rule

inspection/application processing. This description in Duan does not suggest, in any way,

that limited feature information may be propagated, as recited in claim 28. In addition,

the term "non-terminal numeral" in Duan refers tot a category such as SNP, whereas the

terminal numeral defined in the present specification means a word. Accordingly, it is

respectfully submitted that the apparatus and process taught by Duan is different that that

described and claimed by Applicants.

(09/909,901)

Claims 3 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,418,716 to Suematsu as explained in paragraph 7 of the Action. Claims 4 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,903,858 to Saraki for the reasons set forth in paragraph 8 of the Action. Claims 6-10 and 19-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan and Saraki in view of U.S. Patent No. 5,418,717 to Su as explained in paragraph 9 of the Action. Claims 11 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,644,774 to Fukumochi et al. (hereinafter referred to as "Fukumochi") as described in paragraph 10 of the Action. Claims 12-13 and 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,687,383 to Nakayama et al. (hereinafter referred to as "Nakayama") for the reasons set forth in paragraph 11 of the Action. Claims 29 and 33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,101,349 to Tokuume et al. (hereinafter referred to as "Tokuume") as explained in paragraph 12 of the Action. These rejections are respectfully traversed.

Claims 3-13 and 16-26 depend either directly or indirectly from claims 27 and 31, respectively. The secondary references of Suematsu, Saraki, Su, Fukumochi, Nakayama, and Tokuume fail to disclose the features missing from Duan and the Action merely cites these references as teaching other features. Accordingly, these claims are allowable at least for the reasons given above for claims 27 and 31. In addition, claims 28-30 and 32-34 depend from claims 27 and 31, respectively, either directly or indirectly. Thus, these claims also are allowable over the above prior art at least for the reasons given above.

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Claims 30 and 34-38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Duan in view of U.S. Patent No. 5,151,857 to Matsui for the reasons set forth in paragraph 13 of the Action. This rejection is respectfully traversed.

As stated above claims 30 and 34 depend from claim 27 and are believed patentable at least for the reasons given above for claim 27. Matsui does not disclose or suggest modifying Duan to achieve the claimed invention.

Matsui is directed to a dictionary linked text base apparatus having a text searching function. That is, Matsui discloses AND/OR operations. The arithmetic operation executed in the present application claims is a bit operation. Consequently, the apparatus elements and methods for achieving the two different functions are completely different. Consequently, Duan in view of Matsui cannot render applicants' invention unpatentable because neither reference discloses a logical operation that is executed on bit array data and neither reference creates a natural language pattern dictionary that includes both source language patterns and target language patterns. Accordingly, withdrawal of this rejection is respectfully requested.

In view of the foregoing comments distinguishing the claimed invention from the prior art of record, it is believed that claims 3-13 and 16-38 are allowable over the prior art of record and Applicants request withdrawal of the above rejections. Accordingly, it is respectfully requested that a Notice of Allowance be issued indicating that claims 3-13 and 16-38 are allowed over the prior art of record.

Should the Examiner believe that a conference would advance the prosecution of this application, the Examiner is encouraged to telephone the undersigned counsel to arrange such a conference.

Respectfully submitted,

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